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United States  
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# Selected Speeches and News Releases

March 26 - April 1, 1992

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# News Releases

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## **TOLL-FREE RESERVATION NUMBER HELPS NATIONAL FOREST CAMPERS PLAN AHEAD**

WASHINGTON, March 26—It is not too early to reserve a site at a national forest campground for this summer, says F. Dale Robertson, chief of the U.S. Department of Agriculture's Forest Service.

"We are entering the fourth camping season under the reservation system and are very pleased with its success and popularity," said Robertson.

Campers can make reservations at more than 11,000 individual sites nationwide by calling 1-800-283-CAMP (2267) Monday through Friday from 9 a.m. to 6 p.m. (Pacific time) and weekends 9 a.m. to 2 p.m. The TDD number for callers with hearing impairments is 1-800-274-7275.

Reservations can be made up to 120 days in advance for single family sites and 360 days in advance for group sites. A reservation fee of \$6 for family sites and \$10 for group sites will be charged in addition to the regular camping fee. Camping fees at family sites range from \$4 to \$12 per night. Fees for group sites vary depending in unit and group sizes.

"The program has grown from only 33,372 reservations in 1989 to 70,000 in 1991," he said. "Part of this is due to the ease of reserving and paying for sites. Fees can be paid by credit card, money order or personal check, which lets campers avoid carrying extra cash while on vacation."

Robertson said the confidence visitors have in knowing they have a site waiting at the end of the day also contributes to the system's success. He stressed that people who make spur-of-the-moment decisions to visit a national forest campground will still be able to do so as most of the campgrounds on the system also offer some spaces on a first-come, first-served basis.

Marty Longan (202) 205-1777

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USDA RELEASES COST OF FOOD AT HOME FOR FEBRUARY

WASHINGTON, March 27—Here is the U.S. Department of Agriculture’s monthly update of the weekly cost of food at home for February 1992:

Cost of food at home for a week in February 1992

	-----Food plans----- (In Dollars)			
	Thrifty	Low-cost	Moderate cost	Liberal
Families:				
Family of 2 (20-50 years)	49.20	62.30	76.60	95.30
Family of 2 (51 years and over)	46.60	59.80	73.70	88.00
Family of 4 with preschool children	71.70	89.60	109.40	134.40
Family of 4 with elemen- tary schoolchildren	82.20	105.30	131.40	158.30
Individuals in four-person families:				
Children:				
1-2 years	13.00	15.80	18.50	22.40
3-5 years	14.00	17.20	21.30	25.40
6-8 years	17.10	22.80	28.50	33.20
9-11 years	20.40	25.90	33.30	38.50
Females:				
12-19 years	21.30	25.40	30.80	37.20
20-50 years	21.20	26.50	32.10	41.20
51 and over	21.10	25.80	31.80	37.90
Males:				
12-14 years	21.20	29.40	36.60	42.90
15-19 years	21.90	30.30	37.70	43.60
20-50 years	23.50	30.10	37.50	45.40
51 and over	21.30	28.60	35.20	42.10



USDA's Human Nutrition Information Service computes the cost of food at home for four food plans—thrifty, low-cost, moderate-cost, and liberal.

Sue Ann Ritchko, HNIS administrator, said the plans consist of foods that provide well-balanced meals and snacks for a week.

In computing the costs, USDA assumes all food is bought at the store and prepared at home. Costs do not include alcoholic beverages, pet food, soap, cigarettes, paper goods and other nonfood items bought at the store.

“USDA costs are only guides to spending,” Ritchko said. “Families may spend more or less, depending on such factors as where they buy their food, how carefully they plan and buy, whether some food is produced at home, what foods the family likes, and how much food is prepared at home.”

“Most families will find the moderate-cost or low-cost plan suitable,” she said. “The thrifty plan, which USDA uses to set the coupon allotment in the food stamp program, is for families who have tighter budgets. Families with unlimited resources might use the liberal plan.”

To use the chart to estimate your family's food costs:

—For members eating all meals at home—or carried from home—use the amounts shown in the chart.

—For members eating some meals out, deduct 5 percent for each meal eaten away from home from the amount shown for the appropriate family member. Thus, for a person eating lunch out 5 days a week, subtract 25 percent, or one-fourth the cost shown.

—For guests, add 5 percent of the amount shown for the proper age group for each meal.

Costs in the second part of the chart pertain to individuals in four-person families. If your family has more or less than four, total the “individual” figures and make these adjustments (note: larger families tend to buy and use food more economically than smaller ones):

—For a one-person family, add 20 percent.

—For a two-person family, add 10 percent.

—For a three-person family, add 5 percent.

—For a five or six-person family, subtract 5 percent.

—For a family of seven or more, subtract 10 percent.



Details of the four family food plans are available from the Nutrition Education Division, HNIS, USDA, Federal Building, Hyattsville, Md. 20782.

Johna Pierce (301) 436-8617

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## **SATELLITES, COMPUTERS PUT FARM CHEMICALS WHERE NEEDED**

WASHINGTON—A U.S. Department of Agriculture researcher is relying on space-age technology to solve a down-to-earth problem—knowing how much agricultural chemical to use on farm fields.

“Why treat an entire field with the same amount of chemicals?” asks USDA agricultural engineer Thomas S. Colvin. “Over large acreages, the soil can vary greatly.”

That means a farmer’s yields also can vary from field to field or even within a field. “Yet, chemicals are often uniformly applied,” Colvin says. His solution: “Portion out chemicals just where they’re needed.”

Colvin is linking together government satellites and tractor-mounted computers to research uniformly applied chemicals on Iowa farmland.

“We collect data on past crop yields and soils to map each part of a farm field,” he explains. “Then, satellites can accurately pinpoint to within 20 feet on a field where a tractor or combine is located.”

Within the next five years, he says, “the system’s accuracy could be measured in inches.” Colvin also envisions farmers adapting the technology to planting, scouting pests and harvesting crops.

Already, he says, owners of large farms in Indiana, Illinois and Iowa have talked to him about trying it on their fields.

Colvin says the system, including two satellite radio receivers, costs about \$50,000. Also, added costs are incurred when adapting farm equipment so farmers can vary the rates of whatever they are applying.

“In five years, as the number of users increases, the system should cost about \$10,000 or less,” he says. If farmers want to cut that price, “they could either rent equipment or hire crews from a cooperative operating the system.”

Colvin has been developing the Joint Agricultural Navigation Using Satellites (JANUS) System, for the last three years at the National Soil



Tilth Laboratory in Ames, Iowa operated by USDA's Agricultural Research Service.

JANUS is also named after the Roman god of doorways, Colvin says. "Janus has two bearded faces that look to the past and to the future."

"Eventually, JANUS should take much of the guesswork, except for weather variables, out of farming," he says. "With so much information available on each part of his farm, a farmer can be sure that any decision he makes concerning his fields is the best possible."

Colvin and co-researchers at the Ames lab have intensively researched a 160-acre working farm nearby over the last three years. They have measured the yearly yields of soybeans, corn, oats and alfalfa and collected data on a grocery list of variables—from soil fertility to moisture and temperature, the weather, soil profiles and soil organic matter.

The data is stored at the lab in a special computer data base. It integrates information on past yields, current soil fertility, present and past weed and insect pest infestations, as well as other data for each acre of four, square, 40-acre fields.

JANUS uses more than 21 satellites already in place in the Department of Defense's global positioning system. These satellites are deployed for many commercial and military uses, including land surveying, offshore drilling and locating fish for the fishing industry.

At Ames, satellite signals are picked up at two points by radio receiver on the tractor and at a fixed spot outside the field. Those signals are relayed to the tractor-mounted computer.

Colvin says the JANUS system "takes what we know about a field's history and narrows it down to the sector where the tractor is operating." He says data from the lab computer is correlated with the tractor's position and the computer then calculates where and how much chemicals are to be applied.

Hank Becker (301) 504-8547  
Issued: March 27, 1992

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## **DAYTON, OHIO, KICKS OFF NEWEST ELECTRONIC BENEFITS PROJECT**

WASHINGTON, March 27—The U.S. Department of Agriculture and the state of Ohio today will inaugurate the first pilot project using “smart card” or “off-line” computer technology to provide food stamp benefits for 30,000 people in Dayton, Ohio.

The Dayton project is the latest in USDA’s series of tests of electronic benefits transfer, or EBT, for issuing food stamp benefits.

“We’re very excited about this first test of the off-line system,” said Catherine Bertini, assistant secretary of agriculture for Food and Consumer Services. “USDA has tried several projects that have shown the concept of EBT works well. Now we’re ready to try a different way to make the concept work.”

Bertini said plastic cards used in the new EBT project are called “smart cards” because they hold a computer chip that keeps track of each food stamp user’s benefits. The benefits information is updated periodically with a central computer. Previous projects have used systems that stored the benefit account on a central computer and required an “on-line” telephone connection for every transaction.

Under Dayton’s “off-line” EBT system, food stamp users apply for their benefits in the usual way, by filling out forms at their food stamp certification offices. Once their eligibility and level of benefits are determined, accounts are established in their names and they are issued plastic EBT cards. Recipients are taught how to use the cards, and they choose personal identification numbers (PIN) to use with them.

When paying for groceries, food stamp customers’ cards are run through electronic readers, they enter their PINs, and their food stamp accounts are debited for the amount of their purchases. The card’s computer chip records the debit and the retailer’s terminal records a credit.

The retailer then uses his terminal to report food stamp transactions to a central computer, which transfers money from the food stamp benefits account to the retailer’s account. No cash and no food stamps change hands at the grocery store, and all the accounting is done automatically.

Bertini said the Dayton system, dubbed “PayEase,” will operate through 1992 and will then be evaluated for possible expansion statewide. She said that most other states operating EBT systems are still in the pilot



stage, but that Maryland recently decided to expand statewide with an on-line EBT system.

“EBT can have a tremendous impact,” Bertini said. “It is convenient for food stamp customers, it can discourage misuse of food stamps, and it can drastically reduce the amount of paperwork involved in the program. So far it has been very successful, and we’re very optimistic about the Dayton test as well.”

Phil Shanholtzer (703) 305-2286

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## OXYGEN “PINK SLIPS” SHUT DOWN PHOTOSYNTHESIS FACTORIES

WASHINGTON, March 30—A flood of oxygen atoms, triggered by aging, help form the chemical “pink slips” that lay off proteins essential for photosynthesis, U.S. Department of Agriculture researchers report.

“When a leaf on a plant reaches maturity, its photosynthesis factories close down. Until now, we have only suspected how the workers—the proteins in those factories—get their pink slips,” said Autar Mattoo with USDA’s Agricultural Research Service.

He said the research takes scientists closer to genetically engineering crops that can make their own food for a longer, or a shorter, time during the growing season.

“With some crops that produce large fruits, such as melons, keeping the photosynthesis proteins working longer could yield more nutritious foods,” he said. “With other crops, such as peas, letting the proteins quit earlier might mean a quicker yet full harvest.”

In lab experiments, scientists used copper ions to “age” wheat, duckweed and algae artificially. This aging produced hosts of oxygen atoms, in a speeded-up version of what happens when leaves naturally reach maturity, said Mattoo, a molecular biologist. He heads the ARS Plant Molecular Biology Laboratory in Beltsville, Md.

The excess oxygen atoms cause a sulfur-containing amino acid, present in the protein, to form two cross-linked pairs. That action inactivates the protein—in effect, becoming the pink slip, Mattoo said.

The amino acid is known as Cys-247. The protein is rubisco—short for ribulose-1.5-bisphosphate carboxylase/oxygenase—and makes up 40 to 50 percent of all the leaf proteins in nature, Mattoo noted.



Growing green leaves take in carbon dioxide from the atmosphere. Inside each green leaf cell are hundreds of photosynthesis factories—bodies called chloroplasts. In the chloroplasts, rubisco converts the carbon in CO<sub>2</sub> into forms that the plant can use to make its food.

“What happens to inactivate the rubisco is highly complex, but can be likened to recycling,” Mattoo said. After the cross-linking of the Cys-247 amino acids, deactivated rubisco proteins migrate to the chloroplast’s membrane. There, the proteins are chemically broken down to amino acid molecules. The nitrogen-rich amino acids are then transported to supply nutrients to younger cells in leaves and other parts of the plant that are still growing.

“In effect, the plant has intricate processes for recycling what it can still use to nurture younger cells,” he said.

Cross-linking is only one trigger in the photosynthesis shutdown. Mattoo added, “We observed that the protein can migrate to the chloroplast walls without the amino acids first being cross-linked. That means at least two processes of rubisco deactivation are going on, somewhat independently.”

“We still need to find out what the other process is and identify the signals controlling both processes,” he said. “Then we can see how photosynthesis is affected in plants in which these signals are altered.” Oxygen is involved in the breakdown of growth processes in other organisms—including animals and man—but the precise mechanisms are largely unknown, he noted.

Mattoo conducted the studies with Roshni Mehta, Dan Porath and Timothy Fawcett of the Beltsville lab. The results were published recently in the *Journal of Biological Chemistry*.

Jim De Quattro (301) 504-8648

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## RUSSIAN FORAGE LOOKS GOOD FOR U.S. FARMERS

WASHINGTON, March 31—As the United States goes to the aid of the evolving republics that once made up the Soviet Union, American cattle producers in turn might get a hand from a Russian forage.

Two years of field tests in central Oklahoma have shown a new variety of Russian wild rye could give farmers a more economical forage choice for the cooler spring months before summer grasses emerge, according to U.S. Department of Agriculture agronomist Daniel P. Mowrey.

“Farmers are looking for an alternative to planting winter wheat every fall for forage the next spring,” said Mowrey, who works at the Grazinglands Research Laboratory operated in El Reno, Okla., with USDA’s Agricultural Research Service.

“Wheat is expensive to establish in the field when you take into account planting costs and fuel costs to run the equipment,” Mowrey said. “Winter wheat is an annual plant, so you have those costs every year. And the return from the grain on winter wheat hasn’t been that good lately. The money that’s being made on winter wheat is from its value as pasture for cattle.”

By comparison, Russian wild rye is a perennial, Mowrey noted.

“The costs of getting it established in the pasture are pretty close to those for wheat, but you only have to plant this once and it should last for a number of years,” he said.

Russian wild rye may save soil as well as money, Mowrey said, because the land isn’t cultivated as often with a perennial. “That’s a real plus because there are many acres on the southern Great Plains that shouldn’t be cultivated,” he said.

Mowrey has been evaluating alternative cool-season grasses sent to him by state Agricultural Experiment Station personnel as well as ARS colleagues around the country.

Three of the 10 grasses he planted in the fall of 1989 are still making a strong showing in the pasture. He said the best performer is the Russian wild rye.

The study calls for the grasses to be grazed about six months a year at monthly intervals. Mowrey said, “Sometimes in this study, the grass is grazed right down to the ground surface, which admittedly would be poor management for any farmer trying to get his plants to persist.”

However, Russian wild rye has held its ground, although it is not without its drawbacks, Mowrey pointed out.



“Cattle probably won’t gain weight on this like they would on winter wheat, but it is adequate in forage quality to grow stocker cattle,” he explained. “Its crude protein is around 12 percent; and it’s about 60 percent digestible, compared with 18 to 20 percent crude protein and 70 percent digestibility for wheat.”

Mowrey said he will continue his search for alternative cool-season grasses and anticipates evaluating 30 to 40 varieties overall.

Sandy Miller Hays (301) 504-9089

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## KENTUCKY BLUEGRASS MAY CARRY WEED KILLER

WASHINGTON—Dead Kentucky bluegrass may be a potent, natural destroyer of broadleaf weeds and common lawn invaders such as dandelion, a U.S. Department of Agriculture weed scientist says.

Roger D. Hagin said he was first tipped off to the allelopathic possibilities of dead bluegrass when a three-year pasture renovation project in New York ran into trouble. “Allelopathy” is the term scientists use to describe certain plants’ ability to produce natural chemicals that suppress or even kill other plants.

“The farmers in New York were having trouble getting birdsfoot trefoil to grow on certain patches of killed grass,” said Hagin, who works in the Plant Protection Research unit operated in Ithaca, N.Y., with USDA’s Agricultural Research Service. “I identified that grass as Kentucky bluegrass.”

He subsequently noted that natural compounds exuded by the dead bluegrass might someday serve as a natural weed-killer. He had seen similar compounds in earlier studies of quackgrass, a weed that releases substances deadly to slugs when the quackgrass itself is killed.

Hagin has identified the substances from quackgrass as 5-hydroxyindoles or their derivatives. These compounds are found in very few other plants, among them the legume *Griffonia* from West Africa.

Initial lab tests indicated that these same substances were present in Kentucky bluegrass. Hagin is currently working on confirming identification of the substances from Kentucky bluegrass.

One of the three substances pinpointed from quackgrass, 5-hydroxyindoleacetic acid (5-HIAA), acts as a plant growth hormone, but too much can kill rather than stimulate the plant. The other two



compounds identified by Hagin are 5-hydroxytryptophan (5-HTP) and 6-hydroxy-tetrahydro-Beta-carboline-3-carboxylic acid, a derivative of 5-HTP.

It is this derivate of 5-HTP which kills slugs, said Hagin. But all three can linger in a field for up to a year, and the 5-HIAA and 5-HTP can kill weeds that come too close.

“Generally, the worst is past after two months,” he said. “But these compounds will inhibit a lot of weeds.”

Hagin said at least one chemical company is considering manufacturing the synthetic version of the carboline derivative as a slug-killer. The other two compounds may find commercial use as selective weed killers.

A report on Hagin’s work with allelopathy appears in the latest issue of Agricultural Research, the monthly publication of the Agricultural Research Service.

Sandy Miller Hays (301) 504-9089

Issued: April 1, 1992

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## **CCC INTEREST RATE FOR APRIL 4-5/8 PERCENT**

WASHINGTON, April 1—Commodity loans disbursed in April by the U.S. Department of Agriculture’s Commodity Credit Corporation will carry a 4-5/8 percent interest rate, according to Keith Bjerke, executive vice president of the CCC.

The 4-5/8 percent interest rate is up from March’s 4-1/4 percent and reflects the interest rate charged CCC by the U.S. Treasury in April.

Robert Feist (202) 720-6789

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## **ATTENTION TEENS: A CONCERNED “STOMACH” TALKS FOOD SAFETY**

WASHINGTON—You’ve heard the expression, “If only the walls could talk!” Well, what if a teenager’s stomach could communicate? It might go like this:



## MEMORANDUM

To: Teenager's Brain

From: Stomach

Subject: Taking Care of Me

Hi, remember me? I'm the one you shove that food into—those cold pizzas, warmed over nachos and tacos, and hamburgers that were left out on the counter too long. You know what I mean.

Look, I know you are a teenager, but how you and I have survived so far beats me. For both our sakes, may I offer some friendly food safety advice that may help us get into adulthood?

After all, I am not really made of cast-iron as you may think. Now that you have been asked by Mom and Dad to prepare another dinner for the family, I would like to offer some food safety and preparation advice. Goodness knows you could use some.

The statistics say that one of every seven teenagers prepares the family dinner at least three times a week. Lucky me, you have to be the one in seven! Well, it's time you learn what food safety is all about.

Oh, by the way, do you remember that case of the "flu" you had a while back? I've got news for you, that was food poisoning, not the flu. Millions of people, including many teenagers like you, get sick every year because of improper food handling.

Maybe this time you will listen to me. I've sent enough warnings to you in the past, but last night's meal was the last straw. This memorandum is "do or die" for both of us—and for the family as well.

1. SHOPPING. Okay, the next time you are in the grocery store, try to be more careful.

For example, please read the labels carefully. If the words "keep refrigerated" appear on the label, make sure it is cold to the touch in the store and then get the perishable item home right away. Forget about running errands on the way home and stopping off at a friend's house. Go right home.

Also, make sure the packages are not torn or opened.

And when buying cans, remember what I said about those that may be bulging or otherwise deformed. Also look out for rust marks and cans that may be leaking.

2. COOKING INSTRUCTIONS. Okay, this time you have to read the labels for cooking instructions. If you are microwaving, do both of us a favor and don't mix up cooking times for the conventional oven with



microwave cooking times. There's a big difference. The conventional oven takes much longer.

3. THE MICROWAVE. When using the microwave, watch the cooking levels. Don't microwave on high when the instructions say "defrost" or "simmer."

While we are on the subject, don't forget to use the appropriate cookware for thawing and cooking in the microwave. Foam and plastic may melt.

And don't forget to cover foods in the microwave so that steam will help cook them evenly. When finished, uncover microwaved foods carefully—definitely don't hang your face over the dish when you do it. Let the food stand for a few minutes so temperatures can even out. That way, you won't burn my good friend your tongue!

4. THOROUGH COOKING. Whether you are microwaving or using the conventional oven, it takes thorough cooking to kill harmful bacteria. Forget the heroics and don't eat raw or partially cooked meat, poultry, fish or eggs.

Let's make a pact. From now on, will you cook red meat to 160 degrees Fahrenheit and poultry to 180 degrees? If you can't find the meat thermometer, at least make sure the meat is brown or gray inside. Poultry juices should run clear and fish should flake with a fork.

5. SERVING FOOD. Now let's go over a few basics on proper serving. Use clean dishes and utensils to serve food, not those you left out on the counter from the meal before. Never leave perishable food out of the refrigerator for over two hours at room temperature! It's even less than two hours at higher temperatures.

As for your parties, keep cold party food on ice—or serve from platters taken from the refrigerator.

Also, divide hot party food into smaller serving platters. Keep them in the refrigerator and warm them up just before serving.

6. LEFTOVERS. Let's talk leftovers. Boy, have you done a number on me here a couple of times. PLEASE refrigerate perishable food within two hours, not two days! Don't leave that pizza out on the counter overnight! And divide large amounts of leftovers into small, shallow containers for quick cooling in the refrigerator.

7. REHEATING. Here's another delicate subject. Contrary to what you may think, leftovers do have to be thoroughly reheated, even though they were cooked once before.



Bring sauces, soups and gravy to a boil. Use a meat thermometer to make sure leftovers reach 165 degrees Fahrenheit.

8. CAUTION! I know you don't like red lights, but here are the real red lights in food handling: NEVER taste food that looks or smells strange to see if you can still use it. Remember what I said before? I am not castiron. Wrap and discard suspect food carefully so that animals can't get into it.

As for moldy food, the mold you see is only the tip of the iceberg. The mold can be underneath as well. So most moldy food should be pitched. You can save some moldy food, however. Hard cheese, salami, firm fruits and vegetables can be saved by removing a large area around the mold.

Congratulations, you have now graduated from Basic Food Safety, Steps 1-8. If you will just follow these simple, common sense rules, you could save me and yourself a lot of stomach ache—or is that heartburn?

Herb Gantz (202) 690-0351

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